

I. AMENDMENT TO CLAIMS

1-19. (Cancelled)

20. (Allowed) An isolated nucleic acid comprising a nucleotide sequence selected from the group consisting of :

- (a) the nucleotide sequence as set forth in SEQ ID NO: 1;
- (b) a nucleotide sequence encoding the polypeptide as set forth in SEQ ID NO: 2;
- (c) a nucleotide sequence fully complementary to (a) or (b).

21. (Currently Amended) An isolated nucleic acid ~~comprising a nucleic acid sequence that is at least 90% identical to the sequence of the nucleic acid sequence of claim 20~~ encoding a polypeptide that is 90% identical to the amino acid sequence of SEQ ID NO: 2 ~~and encodes a polypeptide that has~~ having the same activity as O-succinylbenzoic acid CoA ligase activity.

22. (Currently Amended) An isolated nucleic acid ~~comprising a nucleic acid sequence that is at least 95% identical to the sequence of the nucleic acid sequence of claim 20~~ encoding a polypeptide that is 90% identical to the amino acid sequence of SEQ ID NO: 2 ~~and encodes a polypeptide that has~~ having the same activity as O-succinylbenzoic acid CoA ligase activity.

23. (Allowed) An isolated nucleic acid that encodes a polypeptide that has O-succinylbenzoic acid CoA ligase activity and hybridizes to the complement of the nucleic acid of claim 20 under the following stringent conditions: a final wash in 0.1X SSC at 68°C.

24. (Currently Amended) A vector comprising the nucleic acid of claim 20 [~~21, 22,~~]
or 23.

25. (Previously Added) The vector of claim 24, wherein said vector is an expression vector.

26. (Currently Amended) The vector of claim 25 that is an integration vector pCR.1menEint, having

- (a) an internal fragment of the ~~menE gene 520 bp in size~~ of SEQ ID NO: 1; and
- (b) a restriction map as set forth in Fig. 1.

27. (Previously Added) The vector of claim 26 wherein the vector has been deposited in the *E. coli* strain Top10/pCR2.1menEint under accession no. DSM 14080.

28. (Previously Added) A host cell comprising the vector of claim 25.

29. (Previously Added) The host cell of claim 28 that is a prokaryotic cell.

30. (Allowed) An isolated nucleic acid consisting of SEQ ID NO: 1 or a fragment thereof and encoding a polypeptide that has O-succinylbenzoic acid CoA ligase activity.

31. (Currently Amended) An isolated nucleic acid consisting of a fragment of at least 40 consecutive nucleotides of SEQ ID NO:1 or the full complement thereof, wherein said isolated nucleic acid is a probe in a hybridization reaction to detect an isolated nucleic acid that is at least 90% identical to that of SEQ ID NO: 1 and encodes a polypeptide that has O-succinylbenzoic acid CoA ligase activity and wherein said hybridization reaction comprise the following stringent conditions: a final wash in 0.1 SSC at 68°C.

32. (Previously Added) The isolated nucleic acid of claim 31, wherein said fragment is a primer or probe.

33. (Allowed) A vector comprising the nucleic acid of claim 30.

34. (Allowed) The vector of claim 33, wherein said vector is an expression vector.

35. (Allowed) A host cell comprising the vector of claim 33.

36. (Allowed) The host cell of claim 35 that is a prokaryotic cell.

- 37. (New) A vector comprising the nucleic acid of claims 21 or 22.
- 38. (New) The vector of claim 37, wherein said vector is an expression vector.
- 39. (New) A host cell comprising the vector of claim 37.
- 40. (New) The host cell of claim 39 that is a prokaryotic cell.
- 41. (New) A vector comprising the nucleic acid of claim 31.
- 42. (New) The vector of claim 41, wherein said vector is an expression vector.
- 43. (New) A host cell comprising the vector of claim 41.
- 44. (New) The host cell of claim 43 that is a prokaryotic cell.